ECOSYSTEM STATUS INDICATORS
Physical Environment

EASTERN BERING SEA
Summer bottom and surface temperatures – Eastern Bering Sea

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The annual AFSC bottom trawl survey for 2005 was started on May 30 and finished on July 25. The average bottom temperature was 3.47˚C, well above the 1982-2004 mean of 2.58˚C (Figure 29). Bottom temperature anomalies from the long-term station means were positive over the most of the shelf region except for the northern sections of the inner and middle shelf regions (Figure 30). Maximum anomalies occurred in the inner and middle domain with 17 stations over +2 degrees Celsius. The 'Cold Pool', usually defined as an area with temperatures less than 2 degrees Celsius, surrounded St. Matthew Island and extended south to about 58.6˚N, about one half a degree further north than last year.

The average 2005 surface temperature, 7.42˚C, was lower than in 2003 or 2004 (long term mean 6.75˚C). About two-thirds of the 2005 survey stations had increases in temperatures with 49 stations having increases 2˚C above long-term station means (Figure 30). The largest surface temperature differences were in the middle domain and southeast portion of the inner domain.

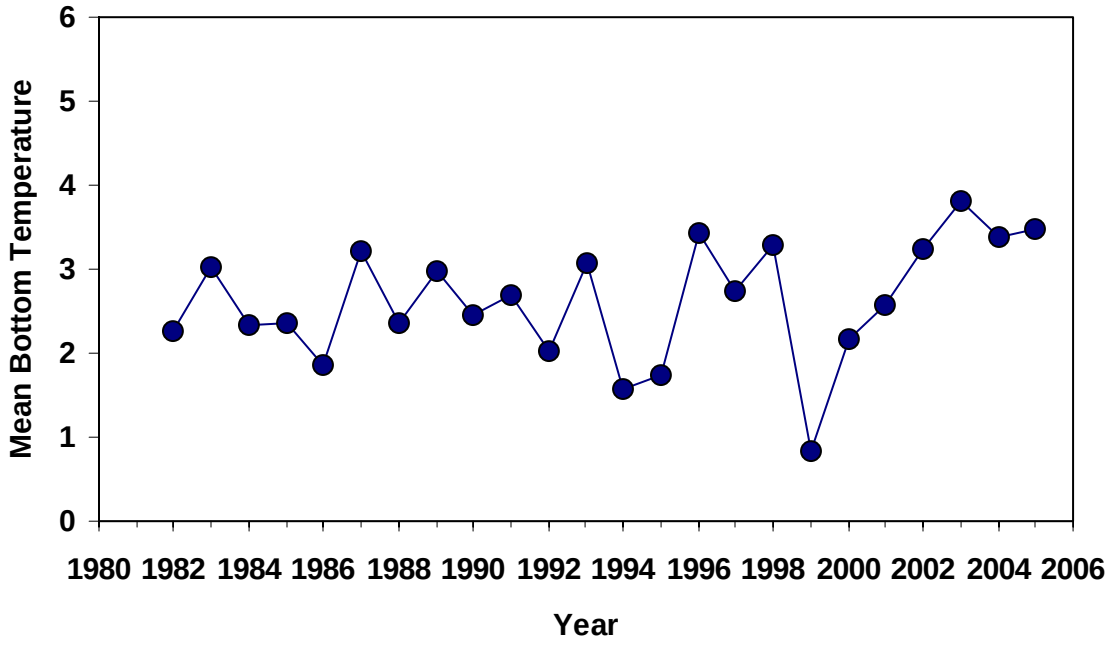

Figure 29. Mean summer bottom temperature (˚C) in the standard bottom trawl survey area of the eastern Bering Sea Shelf, 1975-2005. Temperatures for each tow are weighted by the proportion of their assigned stratum area.

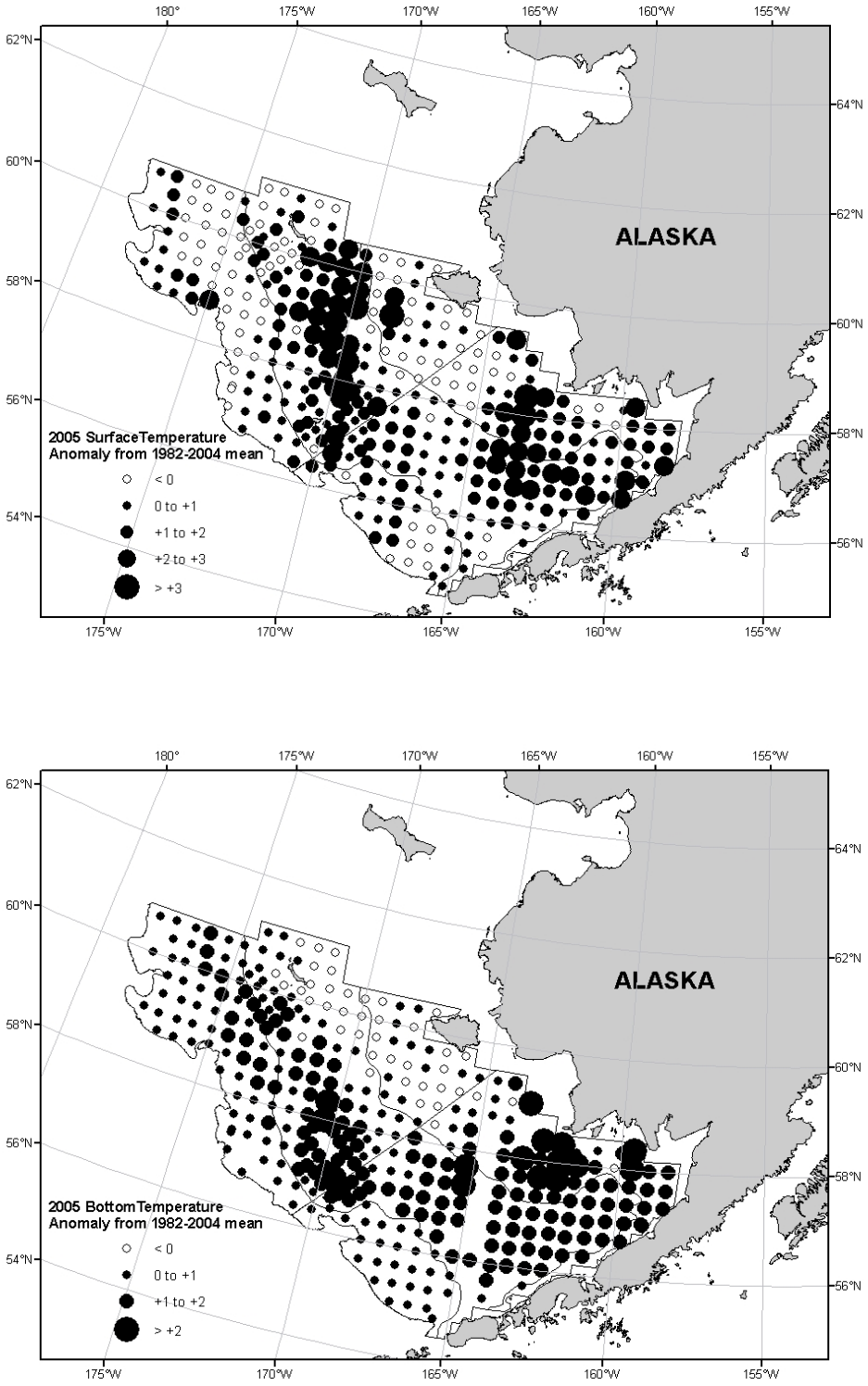

Figure 30. Summer surface (top panel) and bottom (bottom panel) temperature anomalies in 2005 from the 1982-2004 mean at standard bottom trawl survey stations in the eastern Bering Sea.